REMARKS

Claims 1, 5, 7, 22, 24 and 27 are currently amended, and claim 25 has been cancelled.

35 U.S.C. § 112, FIRST PARAGRAPH

In the June 10, 2004 Office Action, the Examiner rejected claims 1-5 and 7-29 under 35 U.S.C. §112, first paragraph, "as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention" (see page 2, paragraph 3 of the Office Action). Applicants respectfully request that the rejection be reconsidered and withdrawn for the following reasons.

The Examiner contends that a "substantially fully cross-linked rubber" is not described in the specification. Applicants disagree, but have nevertheless deleted the word "substantially" to address the 35 U.S.C. §112, second paragraph concern (see below).

The Examiner also contends that rubbers derived from "a polymer that includes terminal and non-terminal unsaturation" are not described in the specification. Applicants disagree, but have amended claim 1 to delete this language, replacing it with a Markush group of rubbers having this property. A list of the rubbers is included, e.g., on page 3, lines 26-29 of the specification.

The Examiner further contends that the requirement of an "uncrosslinked styrenic block copolymer" is not described in the specification. Applicants disagree, but have deleted the limitation in any event. Applicants have added a more specific limitation requiring that "the styrenic block copolymer is not crosslinked with the thermoplastic vulcanizate" to independent claims 1 and 24, and an analogous limitation to claim 22. This limitation is not explicitly described in the specification, but a person of ordinary skill in the art would recognize and understand that the styrenic block copolymer and the thermoplastic vulcanizate are melt blended

together, e.g., as described on page 5, lines 5-15, and are not cross-linked for at least the reasons described below. The definition of "thermoplastic vulcanizate" provided on page 2, lines 21-22 explains that the vulcanizate already is fully cross-linked. Thus, when the vulcanizate is physically melt blended in the absence of a crosslinking agent, e.g., a peroxide, with the styrenic block copolymer, the vulcanizate is incapable under the conditions described in the specification of crosslinking with the styrenic block copolymer.

Finally, the Examiner contends that ethylene-propylene-diene rubber is not described in the specification. However, this rubber is described in the specification. See, e.g., claim 22 prior to this amendment. Also, see, e.g., page 2, lines 1-20 where ethylene-propylene-diene is listed as an example.

35 U.S.C. § 112, SECOND PARAGRAPH

The Examiner rejected claims 1-5 and 7-29 under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. Applicants have deleted the word "substantially" to address the 35 U.S.C. §112, second paragraph concern.

35 U.S.C. § 102(B)

Claims 1-5 and 8-29 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Mitsubishi Yuka, JP 60-166339 ("Yuka"). Applicants respectfully request that the rejection be reconsidered and withdrawn.

As amended, claim 1 features a composition that includes a styrenic block copolymer and a thermoplastic vulcanizate that includes a fully cross-linked rubber selected from ethylene-propylene-diene rubber (EPDM), ethylene-propylene rubber (EPR), styrene butadiene rubber, butadiene rubber, butyl rubber, styrenic rubber, ethylenic rubber, or mixtures of these rubbers. The styrenic block copolymer is not crosslinked with the thermoplastic vulcanizate.

As amended, claim 22 features a composition that includes a styrenic block copolymer having a styrene-ethylene butylene-styrene structure, a styrene-ethylene propylene-styrene structure, or a styrene-ethylene ethylene propylene-styrene structure, and a blend of polypropylene and a fully cross-linked ethylene-propylene-diene copolymer. The styrenic block copolymer is not crosslinked with the blend.

As amended, claim 24 features a composition that includes a styrenic block copolymer and a thermoplastic vulcanizate that includes a fully cross-linked rubber derived from ethylene-propylene-diene monomers (EPDM). The styrenic block copolymer is not crosslinked with the thermoplastic vulcanizate.

As amended, claim 26 features a method of making a polymeric composition. The method includes dynamically vulcanizing a cross-linkable rubber in a polyolefin, and then melt blending the dynamically vulcanized rubber in the polyolefin with a styrenic block copolymer.

Yuka generally describes a partially crosslinked mixture that includes a hydrogenated A-B-A polymer, e.g., styrene-ethylene-butylene-styrene block copolymer, in which A is an aromatic hydrocarbon moiety and B is a hydrogenated conjugated diene moiety. Also included in the mixture are softeners, a peroxide decomposable olefin, various inorganic fillers and a conjugated diene rubber. In a specific example, Yuka blended Kraton G1651 (styrene-ethylene-butylene-styrene block copolymer), process oil, polypropylene, ethylene-propylene copolymer, calcium carbonate and JSR-IR 2200 (isoprene rubber). To this blend, Yuka added benzoyl peroxide, divinylbenzene and an anti-oxidant. The resulting mixture was dynamically vulcanized to give a crosslinked pellet (i.e., a pellet in which ALL the components are crosslinked together, including the hydrogenated A-B-A polymer). The Examiner has asserted that since the styrenic block copolymer, e.g., styrene-ethylene-butylene-styrene block copolymer, is saturated, it would not crosslink, even though Yuka teaches otherwise in that he teaches a crosslinked pellet. Applicants assert that it is well known in the art that saturated polymers, e.g.,

polyethylene and saturated styrenic block copolymers derived from hydrogenating styrene-butadiene-styrene block copolymers, under conditions of Yuka, can crosslink.

Independent claims 1, 22, and 24 require the styrenic block copolymer not to be crosslinked with the thermoplastic vulcanizate. Yuka does not teach or suggest such a limitation. Applicant respectfully submits that claims 1, 22, and 24, and all claims depending from these claims are in condition for allowance.

Regarding claim 26, as discussed above, Yuka discloses blending ALL components together and then dynamically vulcanizing the blend to produce a cross-linked pellet. Claim 26 requires dynamically vulcanizing a cross-linkable rubber in a polyolefin, and then melt blending the dynamically vulcanized rubber in the polyolefin with a styrenic block copolymer. Yuka does not teach or suggest such a limitation . Applicants respectfully submit that claim 26, and all claims depending from this claim are in condition for allowance.

35 U.S.C. § 103(A)

Claims 1-5 and 8-29 have been rejected under 35 U.S.C. § 103(a) as being obvious over Yuka. As discussed above, Yuka does not teach or suggest that the styrenic block copolymer not be crosslinked with the thermoplastic vulcanizate, nor does Yuka teach or suggest dynamically vulcanizing a cross-linkable rubber in a polyolefin, and then melt blending the dynamically vulcanized rubber in the polyolefin with a styrenic block copolymer. Applicants respectfully submit that claims 1, 22, 24 and 26, and all claims depending from these claims are non-obvious over Yuka and are in condition for allowance.

Applicant believes that all claims are in condition for allowance.

Enclosed is $430.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket No. 01464-067001.

Respectfully submitted,

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